Amendments to the Claims

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of detecting an envelope of an audio signal comprising the steps of:

filtering the audio signal to produce a filtered audio signal;

rectifying the filtered audio signal to produce a rectified signal;

detecting peak values of the rectified signal to produce a detected signal;

sampling the detected signal at predetermined time intervals to produce samples; and

resetting the detected signal immediately after sampling.

2. (Original) A method of detecting an envelope of an audio signal comprising the steps of:

filtering the audio signal into multiple filtered audio signals;

rectifying each of the mutiple filtered audio signals into respective multiple rectified signals;

detecting peak values of each of the multiple rectified signals to produce detected signals;

sampling each of the detected signals at predetermined time intervals to produce samples; and

resetting each of the detected signals immediately after sampling.

3. (Currently Amended) The method ~~A method~~ according to claim 1 ~~or claim 2~~ wherein the rectifying step uses half wave rectification.

4. (Currently Amended) The method ~~A method~~ according to claim 1 ~~or claim 2~~ wherein the rectifying step uses full wave rectification.

5. (Currently Amended) The method ~~A method~~ according to claim 1 ~~any one of claims 1 to 4~~ wherein the detected peak values remain at a substantially constant value prior to the sampling step.

6. (Currently Amended) The method ~~A method~~ according to claim 5 wherein the detected signal or detected signals is reset substantially to zero.

7. (Currently Amended) The method ~~A method~~ according to claim 1 ~~any one of claims 1 to 6~~ wherein the sampling rate used in the sampling step is relatively low compared to frequency components in the filtered audio signal.

8. (Currently Amended) The method ~~A method~~ according to claim 1 ~~any one of claims 1 to 7~~ wherein the audio signal is input to a cochlear implant device.

9. (Currently Amended) An apparatus ~~Apparatus~~ for detecting an envelope of an audio signal comprising:

means for filtering the audio signal to produce a filtered audio signal;

means for rectifying the filtered audio signal to produce a rectified signal;

means for detecting the peak values of the rectified signal to produce a detected signal;

means for sampling the detected signal at predetermined time intervals to produce samples; and

means for resetting the means for detecting immediately after sampling, such that the detected signal is reset immediately following sampling.

10. (Currently Amended) An apparatus ~~Apparatus~~ for detecting an envelope of an audio signal comprising:

means for filtering the audio signal into multiple filtered audio signals;

means for rectifying each of the multiple filtered audio signals into respective multiple rectified signals;

means for detecting the peak values of each of the multiple rectified signals to produce detected signals;

means for sampling each of the detected signals at predetermined time intervals to produce samples; and

means for resetting the means for detecting immediately after sampling, such that each of the detected signals are reset immediately following sampling.

11. (Currently Amended) The apparatus ~~Apparatus~~ according to claim 9 ~~or claim 10~~ wherein the means for rectifying is one or more full wave rectifiers.

12. (Currently Amended) The apparatus ~~Apparatus~~ according to claim 9 ~~or claim 10~~ wherein the means for rectifying is one or more half wave rectifiers.

13. (Currently Amended) The apparatus ~~Apparatus~~ according to claim 9 ~~any one of claims 9 to 12~~ wherein the detected peak values remain at a substantially constant value prior to sampling.

14. (Currently Amended) The apparatus ~~Apparatus~~ according to claim 13 wherein the detected signal or detected signals is reset substantially to zero.

15. (Currently Amended) The apparatus ~~Apparatus~~ according to claim 9 ~~any one of claims 9 to 14~~ wherein the sampling rate used by the means for sampling is relatively low compared to frequency components in the filtered audio signal.

16. (Currently Amended) The apparatus ~~Apparatus~~ according to claim 9 ~~any one of claims 9 to 15~~ wherein the audio signal is input to a cochlear implant device.

17. – 70. (Cancelled)

71. (Original) In a multiple channel cochlear implant system permitting sequential stimulation, a method of enhancing the pitch cue of an audio signal perceived by a cochlear implant recipient, wherein the audio signal is processed and input to an implant device of the recipient, the method comprising the steps of:

filtering the audio signal to produce a filtered audio signal;

sampling the filtered audio signal to produce samples; and

synchronising the samples of the filtered audio signal using a selection means and a series of master clock pulses, such that on each master clock pulse no more than one channel is selected by the selection means.

72. (Currently Amended) The method ~~A method~~ according to claim 71 wherein each channel has a low to high transition on a channel enable signal.

73. (Currently Amended) The method ~~A method~~ according to claim 72 wherein each channel enable signal is input to the selection means and passed through the selection means with controllable delay on each channel.

74. (Currently Amended) The method ~~A method~~ according to claim 73 where more than one channel enable signal goes high on a single master clock pulse, the method further comprises the step of selecting one channel, with the remaining channels delayed by successive master clock periods.